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1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/783,338B TIME

DATE: 12/18/2002 TIME: 12:10:21

Input Set : A:\ziegler.ST25.txt

Output Set: N:\CRF4\12182002\I783338B.raw

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      6
              Eggeling, Lothar
      8
              Sahm, Hermann
     10
              Thierbach, Georg
     13 <120> TITLE OF INVENTION: NEW NUCLEOTIDE SEQUENCES CODING FOR THE THRE GENE AND
     14
              PROCESS FOR
              ENZYMATIC PRODUCTION OF L-THREONINE USING CORYNEFORM BACTERIA
     15
     18 <130> FILE REFERENCE: 21123/277066
C--> 20 <140> CURRENT APPLICATION NUMBER: US/09/783,338B
C--> 20 <141> CURRENT FILING DATE: 2001-02-14
     20 <160> NUMBER OF SEQ ID NOS: 8
     22 <170> SOFTWARE: PatentIn version 3.0
     26 <210> SEQ ID NO: 1
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    46 tcaagccaaa aaggggcatt ttcattaaga aaatacccct ttgacctggt gttattgagc
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    50 ccactccage accgcagatg ctgatgatca acaactacga atacgtatct tagcgtatgt
                                                                              300
    52 gtacatcaca atggaattcg gggctagagt atctggtgaa ccgtgcataa acgacctgtg
                                                                              360
    54 attggactct ttttccttgc aaaatgtttt ccagcgg atg ttg agt ttt gcg acc
                                                                              415
    55
                                                 Met Leu Ser Phe Ala Thr
    56
                                                 1
    58 ctt cgt ggc cgc att tca aca gtt gac gct gca aaa gcc gca cct ccg
                                                                              463
    59 Leu Arg Gly Arg Ile Ser Thr Val Asp Ala Ala Lys Ala Ala Pro Pro
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    64 cca tcg cca cta gcc ccg att gat ctc act gac cat agt caa gtg gcc
                                                                              511
    65 Pro Ser Pro Leu Ala Pro Ile Asp Leu Thr Asp His Ser Gln Val Ala
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    68 ggt gtg atg aat ttg gct gcg aga att ggc gat att ttg ctt tct tca
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    69 Gly Val Met Asn Leu Ala Ala Arg Ile Gly Asp Ile Leu Leu Ser Ser
    70
           40
                                45
    72 ggt acg tca aac agt gat acc aag gtg caa gtt cga gcg gtg acc tct
                                                                             607
    73 Gly Thr Ser Asn Ser Asp Thr Lys Val Gln Val Arg Ala Val Thr Ser
                                                65
    76 gcg tat ggc ctg tac tat acg cat gtg gat atc acg ttg aat acg atc
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77 Ala Tyr Gly Leu Tyr Tyr Thr His Val Asp Ile Thr Leu Asn Thr Ile

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81	Thr	Ile	Phe	Thr	Asn	Ile	Gly	Val	Glu	Arg	Lvs	Met	Pro	Val	Asn	Val	, 00	
82				90			-		95	•	_			100				
84	ttt	cat	gtt	gtg	ggc	aag	ttg	gac	acc	aac	ttc	tcc	aaa	ctg	tct	gag	751	
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86			105					110					115					
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	Val		Arg	Leu	Ile	Arg	Ser	Ile	Gln	Ala	Gly	Ala	Thr	Pro	Pro	Glu		
90		120					125					130						
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		Ala	Glu	Lys	Ile		Asp	Glu	Leu	Glu		Ser	Pro	Ala	Ser	-		
	135					140					145					150		
										gca							895	
	GLY	Phe	Pro	Val		Leu	Leu	GLy	Trp	Ala	Met	Met	Gly	Gly		Val		
98	. ~~+				155			4		160					165		0.4	_
																att	94	3
101		ı val	. ьес	170		СТУ	СТА	rrp			. ser	Let	ITTE			lle		
			. ++0			++	~~~		175					180			0.0	-
105	Thr	. ycc	Dhe	The	Tlo	Tlo	ycc Na	Thr	The	Cor	l LLL	. LLG	gga	aag	aag	ggt	99	Ţ
106		. AIC	185		116	116	Ата	190		. ser	File	: тес	195		гуу	сту		
		r act			ttc	caa	aat			aat	aat	+++			. 200	ctg	103	a
109	Leu	Pro	Thr	Phe	Phe	Gln	Asn	Val	Val	Glv	Glv	Phe	Tle	Δla	Thr	Leu	100	,
110		200				0	205			. 013	O± y	210			1111	пса		
112	cct	qca	tca	att	act	tat			aco	rtto	caa			ct.t	gag	atc	108	7
																Ile		•
	215					220					225		2			230		
116	aaa	ccg	ago	cag	ato	atc	gca	tct	gga	att	gtt	gtg	ctg	ttg	gca	ggt	113	5
117	Lys	Pro	Ser	Gln	Ile	Ile	Ala	Ser	ĞÎy	, Ile	Val	Val	Leu	Leu	Āla	ĞÎy		
118					235					240					245			
120	ttg	aca	ctt	gtg	caa	tct	ctg	cag	gac	ggc	atc	acg	ggc	gct	ccg	gtg	1183	3
121	Leu	Thr	Leu			Ser	Leu	Gln			Ile	Thr	Gly	Ala	Pro	Val		
122				250					255					260				
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		Ala			Arg	Phe	Phe			Leu	Leu	Phe		-	Gly	Ile		
126			265		4_			270					275					_
120	gtt	gct	ggc	gtg	ggt	ttg	ggc	att	cag	ctt	tct	gaa	atc	ttg	cat	gtc	1279	9
130			сту							Leu				ьeu	HIS	vaı		
										gca				+ ~ ~	tat	202	122	7
133	Met	T.e.ii	Pro	Δla	Mot	Glu	Sar	M la	ŊCa	Ala	Dro	Aat Asn	Tur	Sor	Cor	aCa Thr	1327	′
	295		110	7110	ricc	300	261	Ala	Ата	Ата	305	ASII	ı yı	ser	261	310		
			cac	att	atc		aat	aac	ato	acc		aca	acc	ttc	aca		1375	5
137	Phe	Ala	Ara	Ile	Ile	Ala	Glv	Glv	Val	Thr	Ala	Ala	Ala	Phe	Ala	Val	101	,
138	_		- 9		315		1	1		320					325			
	ggt	tgt	tac	gcq		tqa	tcc	tca	gta	att	att	qca	qaa	ctt		aca	1423	3
141	Ġĺу	Cys	Tyr	Ālā	Ğlu	Trp	Ser	Ser	۷al	Ile	Ile	Āla	Ğĺv	Leu	Thr	Ala		
142	_	=	-	330		-			335				4	340				

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149 150	Val	Ser 360	Ala	Ala	Ala	Ile	Ala 365	Ala	Thr	Ala	Val	Gly 370	ttc Phe	Thr	ggt Gly	Gly	1519
153 154	Leu 375	Leu	Ala	Arg	Arg	Phe 380	Leu	Ile	Pro	Pro	Leu 385	Ile	Val	Ala	att Ile	Ala 390	1567
157 158	Gly	Ile	Thr	Pro	Met 395	Leu	Pro	Gly	Leu	Àla 400	Ile	Tyr	Arg	Gly	atg Met 405	Tyr	1615
161 162	Ala	Thr	Leu	Asn 410	Asp	Gln	Thr	Leu	Met 415	Gly	Phe	Thr	Asn	Ile 420	gcg Ala	Val	1663
165 166	Ala	Leu	Ala 425	Thr	Ala	Ser	Ser	Leu 430	Ala	Ala	Gly	Val	Val 435	Leu	ggt Gly	Glu	1711
169 170	Trp	Ile 440	Ala	Arg	Arg	Leu	Arg 445	Arg	Pro	Pro	Arg	Phe 450	Asn	Pro	tac Tyr	Arg	1759
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186	gaca	actco	gtc c	cacc	ccac	ga at	ccct	tcac	gct	gttg	jaag	agga	aacc	ege a	agcco	gtgcc	2024
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190	ctc	ggcgt	itg a	acct	cago	gg co	ctgcg	gttac	acc	aagg	ıtcg	cttc	tgaa	ica d	cgago	aagct	2144
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206	acac	rtato	יבא ב	tott	ttcc	ia co	attt	ratt	yaa att	acto	caa	tata	caac	יבר כ	rastt	ggtgg	2624
																cacac	2684
210	aato	ccac	ta t	atac	iatac	a go	acta	tcad	cta	ttac	taa	ttcc	taac	at t	ttac	gccag	2744
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			gc t		, ,										,,,,,		2817
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238			35				_	40					45	•		_
241	Asp	Ile	Leu	Leu	Ser	Ser	Gly	Thr	Ser	Asn	Ser	Asp	Thr	Lys	Val	Gln
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246						70					75	-				80
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	Val	Val	Leu	Leu		Gly	Leu	Thr	Leu		Gln	Ser	Leu	Gln	Asp	Gly
290				_	245					250					255	
	Ile	Thr	Gly		Pro	Val	Thr	Ala		Ala	Arg	Phe	Phe		Thr	Leu
294	_			260		_			265					270		
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314			_	340				_	345					350		
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318	**. *	61	355	m)	6 3	6 3	_	360		_	_	_,	365		_	_
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	Phe	Thr	Asn	Ile 420		Val	Ala	Leu	Ala 425			Ser	Ser	Leu 430		Ala	
	Gly	Val	Val 435		Gly	Glu	Trp	Ile 440		Arg	Arg	Leu	Arg 445		Pro	Pro	
	Arg	Phe 450		Pro	Tyr	Arg	Ala 455		Thr	Lys	Ala	Asn 460		Phe	Ser	Phe	
	Gln 465	Glu	Glu	Ala	Glu	Gln 470	Asn	Gln	Arg	Arg	Gln 475	Arg	Lys	Arg	Pro	Lys 480	
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364	<22	1> N	AME/	KEY:	CDS												
	<222					0)	(174)	6)									
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																caattg	120
													-9:				120
374	caco	cacto	cca d	gcaco	acad	ra to	acta	ataat	caa	acaa	rtac	gaat	acat	at o	rttad		180
																gcgtat	180 240
376	gtgt	cacat	tca d	caat	ggaat	t c	gggg	ctaga	a gta	atct	ggtg	aaco	cgtgo	cat a	aaac	gcgtat gacctg	240
376 378		cacat	tca d	caat	ggaat	t c	gggg	ctaga	a gta	atct	ggtg cgg a	aaco	cgtgo ctg a	cat a agt t	aaacq ttt q	gcgtat gacctg gcg	
376 378 379	gtgt	cacat	tca d	caat	ggaat	t c	gggg	ctaga	a gta	atct	ggtg cgg a N	aaco atg t Met I	cgtgo ctg a	cat a agt t	aaaco ttt (Phe <i>l</i>	gegtat gacetg geg Ala	240
376 378 379 380	gtgt tgat	tacat	tca (act (caato	ggaat	it co	ggggo	ctaga	a gta	atcto	ggtg cgg a N	aaco atg t Met I L	egtgo etg a Leu S	cat a agt t Ser E	aaacq ttt q Phe A	gogtat gacctg gog Ala	240 294
376 378 379 380 383	gtgt tgat acc	tacat ttgga ctt	tca d act d cgt	caato ctttt ggc	ggaat tcct cgc	et co	gggg caaaa tca	ctaga atgti aca	gta tto gtt	atcto ccago gac	ggtg egg a ! : gct	aaco atg t Met I l gca	egtgo etg a Leu S	cat a agt t Ser I	aaacq ttt q Phe <i>I</i> gca	gcgtat gacctg gcg Ala cct	240
376 378 379 380 383 384	gtgt tgat	tacat ttgga ctt	tca d act d cgt	caato ctttt ggc	ggaat tcct cgc Arg	et co	gggg caaaa tca	ctaga atgti aca	gta tto gtt	gac Asp	ggtg egg a ! : gct	aaco atg t Met I l gca	egtgo etg a Leu S	cat a agt t Ser I	aaaco ttt (Phe A gca Ala	gcgtat gacctg gcg Ala cct	240 294
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376 378 379 380 383 384 385 387	gtgt tgat acc Thr	ctt Leu cca	cgt Arg	ggc Gly cca	ggaat ctcct cgc Arg 10 cta	att Ile	tca Ser	atgtt aca Thr	gtt Val gat	gac Asp ctc	ggtg egg a N gct Ala act	aaco atg t Met I l gca Ala gac	cat cat	eat a agt t Ser E gcc Ala agt	gca Ala 20	gcgtat gacctg gcg Ala cct Pro	240 294
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376 378 379 380 383 384 385 387 388 389 391	acc Thr ccg Pro	ctt Leu cca Pro	cgt Arg tcg Ser	ggc Gly cca Pro 25	cgc Arg 10 cta Leu	att Ile gcc Ala	tca Ser ccg Pro	aca Thr att Ile	gtt Val gat Asp 30 aga	gac Asp 15 ctc Leu	ggtg cgg a N gct Ala act Thr	aaco atg t Met I l gca Ala gac Asp	cetted actions and the cetter actions	gcc Ala agt Ser 35	gca Ala Caa Gln	gcgtat gacctg gcg Ala cct Pro gtg Val	240 294 342
376 378 379 380 383 384 385 387 388 389 391 392	gtgt tgat acc Thr ccg Pro	ctt Leu cca Pro	cgt Arg tcg Ser gtg Val	ggc Gly cca Pro 25	cgc Arg 10 cta Leu	att Ile gcc Ala	tca Ser ccg Pro	aca Thr att Ile gcg	gtt Val gat Asp 30 aga	gac Asp 15 ctc Leu	ggtg cgg a N gct Ala act Thr	aaco atg t Met I l gca Ala gac Asp	aaa Lys cat His	gcc Ala agt Ser 35	gca Ala Caa Gln	gcgtat gacctg gcg Ala cct Pro gtg Val	240 294 342 390
376 378 379 380 383 384 385 387 388 389 391 392 393	acc Thr ccg Pro	ctt Leu cca Pro	cgt Arg tcg Ser gtg Val	ggc Gly cca Pro 25 atg	cgc Arg 10 cta Leu aat Asn	att Ile gcc Ala ttg	tca Ser ccg Pro gct Ala	aca Thr att Ile gcg Ala 45	gtt Val gat Asp 30 aga Arg	gac Asp 15 ctc Leu att	ggtg egg a gct Ala act Thr ggc Gly	aaccatg tended I	aaa Lys cat His att Ile	gcc Ala agt Ser Sttg Leu	gca Ala 20 caa Gln ctt Leu	gcgtat gacctg gcg Ala o cct Pro gtg Val tct Ser	240294342390438
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376 378 379 380 383 384 385 387 388 391 392 393 395 396	acc Thr ccg Pro	ctt Leu cca Pro ggt Gly	cgt Arg tcg Ser gtg Val 40 acg	ggc Gly cca Pro 25 atg Met	cgc Arg 10 cta Leu aat Asn	att Ile gcc Ala ttg Leu agt	tca Ser ccg Pro gct Ala gac Asp	aca Thr att Ile gcg Ala 45	gtt Val gat Asp 30 aga Arg	gac Asp 15 ctc Leu att Ile	ggtg egg a gct Ala act Thr ggc Gly	aaccatg to the second s	aaa Lys cat His att Ile 50	get aget to gee Ala aget Ser 35 ttg Leu gea	gca Ala 20 caa Gln ctt Leu	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser	240294342390438
376 378 379 380 383 384 385 387 388 391 392 393 395 396 397	acc Thr ccg Pro gcc Ala tca Ser	ctt Leu cca Pro ggt Gly ggt Gly 55	cgt Arg tcg Ser gtg Val 40 acg Thr	ggc Gly cca Pro 25 atg Met tca Ser	cgc Arg 10 cta Leu aat Asn	att Ile gcc Ala ttg Leu agt Ser	tca Ser ccg Pro gct Ala gac Asp	aca Thr att Ile gcg Ala 45 acc	gtt Val gat Asp 30 aga Arg aag	gac Asp 15 ctc Leu att Ile gta Val	ggtg cgg a gct Ala act Thr ggc Gly caa Gln	aaccatg to the second s	aaa Lys cat His att Ile 50 cga Arg	gcc Ala agt Ser Sttg Leu gca Ala	gca Ala 20 caa Gln ctt Leu gtg	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser acc Thr	240294342390438486
376 378 379 380 383 384 385 387 388 391 392 393 395 396 397 399	acc Thr ccg Pro gcc Ala tca Ser	ctt Leu cca Pro ggt Gly ggt Gly 55	cgt Arg tcg Ser gtg Val 40 acg Thr	ggc Gly cca Pro 25 atg Met tca Ser	cgc Arg 10 cta Leu aat Asn aat	att Ile gcc Ala ttg Leu agt Ser	tca Ser ccg Pro gct Ala gac Asp 60 tac	aca Thr att Ile gcg Ala 45 acc Thr	gtt Val gat Asp 30 aga Arg aag Lys	gac Asp 15 ctc Leu att Ile gta Val	ggtg ggtg gct Ala act Thr ggc Gly caa Gln	aaccatg to the second s	aaa Lys cat His att Ile 50 cga Arg	gcc Ala agt ttg Caa Ala ttg	gca Ala 20 caa Gln ctt Leu gtg Val	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser acc Thr	240294342390438
376 378 380 383 384 385 387 388 391 392 393 395 396 397 399 400	acc Thr ccg Pro gcc Ala tca Ser tct	ctt Leu cca Pro ggt Gly ggt Gly 55	cgt Arg tcg Ser gtg Val 40 acg Thr	ggc Gly cca Pro 25 atg Met tca Ser	cgc Arg 10 cta Leu aat Asn aat	att Ile gcc Ala ttg Leu agt Ser tac	tca Ser ccg Pro gct Ala gac Asp 60 tac	aca Thr att Ile gcg Ala 45 acc Thr	gtt Val gat Asp 30 aga Arg aag Lys	gac Asp 15 ctc Leu att Ile gta Val	ggtg ggtg gct Ala act Thr ggc Gly caa Gln gat Asp	aaccatg to the second s	aaa Lys cat His att Ile 50 cga Arg	gcc Ala agt ttg Caa Ala ttg	gca Ala 20 caa Gln ctt Leu gtg Val	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser acc Thr	240294342390438486
376 378 380 383 384 385 387 388 391 392 393 395 397 399 400 401	acc Thr ccg Pro gcc Ala tca Ser tct Ser 70	ctt Leu cca Pro ggt Gly 55 gcg Ala	cgt Arg tcg Ser gtg Val 40 acg Thr	ggc Gly cca Pro 25 atg Met tca Ser ggt Gly	cgc Arg 10 cta Leu aat Asn ttg Leu	att Ile gcc Ala ttg Leu agt Ser tac Tyr	tca Ser ccg Pro gct Ala gac Asp 60 tac	aca Thr att Ile gcg Ala 45 acc Thr acg	gtt Val gat Asp 30 aga Arg aag Lys	gac Asp 15 ctc Leu att Ile gta Val	ggtg ggtg gct Ala act Thr ggc Gly caa Gln gat Asp	aaccatg to see the see	cat His att Ile 50 cga Arg	gcc Ala agt Ser Leu gca Ala ttg	gca Ala 20 caa Gln ctt Leu gtg Val aat Asn	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser acc Thr acg Thr 85	240294342390438486534
376 378 389 383 384 385 387 388 391 392 393 395 396 397 400 401 403	acc Thr ccg Pro gcc Ala tca Ser tct Ser 70 atc	ctt Leu cca Pro ggt Gly 55 gcg Ala	cgt Arg tcg Ser gtg Val 40 acg Thr tac Tyr atc	ggc Gly cca Pro 25 atg Met tca Ser ggt Gly ttc	cgc Arg 10 cta Leu aat Asn ttg Leu acc	att Ile gcc Ala ttg Leu agt Ser tac Tyr 75 aac	tca Ser ccg Pro gct Ala gac Asp 60 tac Tyr	aca Thr att Ile gcg Ala 45 acc Thr acg Thr	gtt Val gat Asp 30 aga Arg aag Lys cac	gac Asp 15 ctc Leu att Ile gta Val gtg	ggtg ggtg gct Ala act Thr ggc Gly caa Gln gat Asp 80 agg	aaccatg to at get a second to the second to	cette a aaa Lys cat His att Ile 50 cga Arg acg Thr atg	get aget to get Ala aget Ser I teu gea Ala teu ceg	gca Ala 20 caa Gln ctt Leu gtg Val aat Asn	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser acc Thr acg Thr 85 aac	240294342390438486
376 378 389 383 384 385 387 388 391 392 393 395 396 397 400 401 403 404	acc Thr ccg Pro gcc Ala tca Ser tct Ser 70	ctt Leu cca Pro ggt Gly 55 gcg Ala	cgt Arg tcg Ser gtg Val 40 acg Thr tac Tyr atc	ggc Gly cca Pro 25 atg Met tca Ser ggt Gly ttc	cgc Arg 10 cta Leu aat Asn ttg Leu acc Thr	att Ile gcc Ala ttg Leu agt Ser tac Tyr 75 aac	tca Ser ccg Pro gct Ala gac Asp 60 tac Tyr	aca Thr att Ile gcg Ala 45 acc Thr acg Thr	gtt Val gat Asp 30 aga Arg aag Lys cac	gac Asp 15 ctc Leu att Ile gta Val gtg Val	ggtg ggtg gct Ala act Thr ggc Gly caa Gln gat Asp 80 agg	aaccatg to at get a second to the second to	cette a aaa Lys cat His att Ile 50 cga Arg acg Thr atg	get aget to get Ala aget Ser I teu gea Ala teu ceg	gca Ala 20 caa Gln ctt Leu gtg Val aat Asn gtc	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser acc Thr acg Thr 85 aac	240294342390438486534
376 378 389 383 384 385 387 388 391 392 393 395 396 397 400 401 403 404 405	acc Thr ccg Pro gcc Ala tca Ser tct Ser 70 atc	ctt Leu cca Pro ggt Gly ggt Gly 55 gcg Ala acc	cgt Arg tcg Ser gtg Val 40 acg Thr tac Tyr atc	ggc Gly cca Pro 25 atg Met tca Ser ggt Gly ttc Phe	cgc Arg 10 cta Leu aat Asn ttg Leu acc Thr 90	att Ile gcc Ala ttg Leu agt Ser tac Tyr 75 aac Asn	tca Ser ccg Pro gct Ala gac Asp 60 tac Tyr atc	aca Thr att Ile gcg Ala 45 acc Thr acg Thr	gtt Val gat Asp 30 aga Arg aag Lys cac His	gac Asp 15 ctc Leu att Ile gta Val gtg Val gag Glu 95	ggtg ggtg gct Ala act Thr ggc Gly caa Gln gat Asp 80 agg Arg	aaccatg to at the second secon	aaa Lys cat His att Ile 50 cga Arg acg Thr atg Met	gcc Ala agt Ser It gca Ala ttg Leu ccg Pro	gca Ala 20 caa Gln ctt Leu gtg Val aat Asn gtc Val	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser acc Thr acg Thr 85 aac Asn	240294342390438486534582
376 378 380 383 384 385 387 388 391 392 393 395 396 397 400 401 403 404 405 407	acc Thr ccg Pro gcc Ala tca Ser tct Ser 70 atc	ctt Leu cca Pro ggt Gly ggt Gly 55 gcg Ala acc Thr	cgt Arg tcg Ser gtg Val 40 acg Thr tac Tyr atc Ile cat	ggc Gly cca Pro 25 atg Met tca Ser ggt Gly ttc Phe gtt	cgc Arg 10 cta Leu aat Asn ttgu acc Thr 90 gta	att Ile gcc Ala ttg Leu agt Ser tac Tyr 75 aac Asn ggc	tca Ser ccg Pro gct Ala gac Asp 60 tac Tyr atc Ile	aca Thr att Ile gcg Ala 45 acc Thr acg Thr ggt Gly	gtt Val gat Asp aga Arg aag Lys cac His gtg	gac Asp 15 ctc Leu att Ile gta Val gag Glu 95 acc	ggtg ggtg gct Ala act Thr ggc Gly caa Gln gat Asp 80 agg Arg	aaccatg to at the second of th	cetted as a Lys cat His att E SO cat Arg acg Thr atg Met too	gcc Ala agt ser It gca Ala ttg Leu ccg Pro aaa	gca Ala 20 caa Gln ctt Leu gtg Val aat Asn gtc Val 100 ctg	gcgtat gacctg gcg Ala cct Pro gtg Val tct Ser acc Thr acg Thr 85 aac Asn	240294342390438486534

VERIFICATION SUMMARY

DATE: 12/18/2002 PATENT APPLICATION: US/09/783,338B TIME: 12:10:22

Input Set : A:\ziegler.ST25.txt
Output Set: N:\CRF4\12182002\I783338B.raw

L:20 M:270 C: Current Application Number differs, Replaced Current Application No L:20 M:271 C: Current Filing Date differs, Replaced Current Filing Date